Undergraduate Student Managed Fund
Spring 2019 Portfolio Report
Team Terrion-Wilkos
Introduction

Co-Lead Managers: John Quevreaux and Samantha Martin
Portfolio Manager: Harrison Newman
Communication Manager: Zachary Yellen
Web Manager: Sharon Liu

Matthew Arons
August Densby
Austin Langer
Sharon Liu
Samantha Martin

Harrison Newman
Trent Nobile
Alana Phillips
John Quevreaux
Zachary Yellen

Undergraduate Supervisor: Patrick Terrion & Christopher Wilkos
Fund Director: Chinmoy Ghosh
Portfolio Overview

Philosophy
Managers invest with a 10-year time horizon to outperform the S&P 500 by finding investments that have been inefficiently valued by the market.

Investment Style
Managers use a research and bottom up security selection to find investments which are fundamentally undervalued by the market through financial modeling.

Strategy
Managers review their specific sector assignments to find companies with strong balance sheets and business models that have a sufficient margin of safety.
Investment Process

**Research and Model**
- Careful financial research conducted in advance of investment decisions
- Analyze annual reports to prepare models such as DCF and DDM

**Stock Pitch Procedure**
- Send out slide deck and model to managers in advance
- Engage in constructive discussion and answer any questions that arise

**Monitor and Rebalance**
- Stay up to date with both individual position and market developments
- Reallocate capital if necessary
  - December 24th: added to all positions at a low point in the market
Key Points of Emphasis During Weekly Pitches:

**Competitive Advantage**
- Is their recent success a fad or new trend?
- Example: Disney has strong brand loyalty and unparalleled customer experience

**Demand Potential**
- How can a name brand company keep growing consistently?
- Example: AXP can benefit from the increasing use of cards globally

**Exposure to Long-term Trends**
- SMF Managers consider all economic factors and business trends
- Example: CarMax in the ride-sharing space; Costco’s moat against the Amazon effect
Portfolio Performance

Portfolio & Equity Performance vs S&P 500

<table>
<thead>
<tr>
<th>Undergraduate Portfolio</th>
<th>S&amp;P 500 ETF (SPY)</th>
<th>Equity vs. S&amp;P 500 Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Value $</td>
<td>1,368,035</td>
<td>Beginning Value $ 289.84</td>
</tr>
<tr>
<td>Current Value $</td>
<td>1,439,965</td>
<td>Current Value $ 290.02</td>
</tr>
<tr>
<td>Absolute Change $</td>
<td>71.930</td>
<td>Absolute Change $ 0.18</td>
</tr>
<tr>
<td>% Change</td>
<td>5.26%</td>
<td>% Change</td>
</tr>
<tr>
<td>Difference in Performance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.20%
# Total Portfolio Unrealized Gains

<table>
<thead>
<tr>
<th>Ticker</th>
<th>Name</th>
<th>Sector</th>
<th>Dividend Yield</th>
<th>Date Purchased</th>
<th>Shares</th>
<th>Average Purchase Price</th>
<th>Price</th>
<th>Cost Basis</th>
<th>Market Value</th>
<th>% of Portfolio</th>
<th>Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPY</td>
<td>SPDR S&amp;P 500 ETF</td>
<td>-</td>
<td>1.83%</td>
<td>10/1/2018</td>
<td>-</td>
<td>-</td>
<td>289.84</td>
<td>-</td>
<td>-</td>
<td>0.00%</td>
<td>-</td>
<td>0.00%</td>
</tr>
<tr>
<td>ULTA</td>
<td>Ulta Beauty Inc</td>
<td>Consumer Discretionary</td>
<td>0.00%</td>
<td>12/26/2018</td>
<td>286</td>
<td>271.17</td>
<td>350.88</td>
<td>77,283</td>
<td>100,001</td>
<td>6.94%</td>
<td>-22,718</td>
<td>-29.40%</td>
</tr>
<tr>
<td>AXP</td>
<td>American Express</td>
<td>Financials</td>
<td>1.41%</td>
<td>12/26/2018</td>
<td>1,079</td>
<td>106.27</td>
<td>113.67</td>
<td>114,665</td>
<td>122,650</td>
<td>8.52%</td>
<td>7,585</td>
<td>6.06%</td>
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<tr>
<td>DIS</td>
<td>Walt Disney Co.</td>
<td>Communication Services</td>
<td>1.40%</td>
<td>12/26/2018</td>
<td>835</td>
<td>114.36</td>
<td>132.45</td>
<td>95,487</td>
<td>110,596</td>
<td>7.68%</td>
<td>15,109</td>
<td>15.82%</td>
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<tr>
<td>EA</td>
<td>Electronic Arts</td>
<td>Technology</td>
<td>0.00%</td>
<td>12/26/2018</td>
<td>800</td>
<td>90.94</td>
<td>93.14</td>
<td>72,749</td>
<td>74,512</td>
<td>5.17%</td>
<td>-1,763</td>
<td>2.42%</td>
</tr>
<tr>
<td>PDL</td>
<td>Prologis Inc</td>
<td>Real Estate</td>
<td>2.98%</td>
<td>12/26/2018</td>
<td>1,386</td>
<td>63.83</td>
<td>75.57</td>
<td>88,465</td>
<td>101,968</td>
<td>7.08%</td>
<td>-13,503</td>
<td>15.26%</td>
</tr>
<tr>
<td>LMT</td>
<td>Lockheed Martin Corporation</td>
<td>Industrials</td>
<td>2.50%</td>
<td>12/26/2018</td>
<td>332</td>
<td>296.28</td>
<td>314.26</td>
<td>98,366</td>
<td>104,334</td>
<td>7.25%</td>
<td>5,968</td>
<td>6.07%</td>
</tr>
<tr>
<td>GOOG</td>
<td>Alphabet Inc. Class C</td>
<td>Communication Services</td>
<td>0.00%</td>
<td>12/26/2018</td>
<td>97</td>
<td>1,040.55</td>
<td>1,236.37</td>
<td>100,934</td>
<td>119,928</td>
<td>8.38%</td>
<td>18,994</td>
<td>18.32%</td>
</tr>
<tr>
<td>UNH</td>
<td>UnitedHealth Group Inc</td>
<td>Health Care</td>
<td>1.33%</td>
<td>1/31/2019</td>
<td>408</td>
<td>269.97</td>
<td>221.75</td>
<td>110,148</td>
<td>90,474</td>
<td>6.28%</td>
<td>(19,674)</td>
<td>-17.86%</td>
</tr>
<tr>
<td>MSG</td>
<td>Madison Square Garden Co</td>
<td>Consumer Discretionary</td>
<td>0.00%</td>
<td>1/31/2019</td>
<td>268</td>
<td>276.34</td>
<td>308.20</td>
<td>74,060</td>
<td>82,598</td>
<td>5.74%</td>
<td>8,538</td>
<td>11.53%</td>
</tr>
<tr>
<td>COST</td>
<td>Costco Wholesale Corporation</td>
<td>Consumer Staples</td>
<td>1.08%</td>
<td>2/7/2019</td>
<td>356</td>
<td>205.00</td>
<td>245.81</td>
<td>74,404</td>
<td>87,508</td>
<td>6.08%</td>
<td>13,104</td>
<td>17.61%</td>
</tr>
<tr>
<td>KMX</td>
<td>ConMax, Inc</td>
<td>Consumer Discretionary</td>
<td>0.00%</td>
<td>2/7/2019</td>
<td>1,652</td>
<td>60.28</td>
<td>77.00</td>
<td>95,568</td>
<td>127,204</td>
<td>8.83%</td>
<td>27,616</td>
<td>27.73%</td>
</tr>
<tr>
<td>MSFT</td>
<td>Microsoft Corporation</td>
<td>Consumer Staples</td>
<td>1.70%</td>
<td>2/15/2019</td>
<td>1,021</td>
<td>107.62</td>
<td>123.37</td>
<td>109,899</td>
<td>126,084</td>
<td>8.76%</td>
<td>16,096</td>
<td>14.63%</td>
</tr>
<tr>
<td>CHTR</td>
<td>Charter Communications</td>
<td>Communication Services</td>
<td>0.00%</td>
<td>3/14/2019</td>
<td>321</td>
<td>353.84</td>
<td>359.37</td>
<td>113,424</td>
<td>115,358</td>
<td>8.01%</td>
<td>1,934</td>
<td>1.71%</td>
</tr>
<tr>
<td>EXP</td>
<td>Boston Properties</td>
<td>Real Estate</td>
<td>2.84%</td>
<td>4/4/2019</td>
<td>574</td>
<td>137.68</td>
<td>132.99</td>
<td>79,017</td>
<td>76,336</td>
<td>5.20%</td>
<td>(2,881)</td>
<td>-3.39%</td>
</tr>
<tr>
<td>CASH</td>
<td>Cash</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.00</td>
<td>4.14</td>
<td>350,579</td>
<td>1,439,964.54</td>
<td>100.00%</td>
<td>131,718.50</td>
<td>9.26%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sector</th>
<th>Target % of Total Portfolio</th>
<th>% of invested portfolio</th>
<th>S&amp;P 500 Sector Weight</th>
<th>Sector Performance (Portfolio)</th>
<th>Sector Performance (Market)</th>
<th>Difference in Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Materials</td>
<td>2.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>2.50%</td>
<td>0.00%</td>
<td>-2.15%</td>
</tr>
<tr>
<td>Consumer Discretionary</td>
<td>15.00%</td>
<td>21.51%</td>
<td>21.52%</td>
<td>10.16%</td>
<td>10.78%</td>
<td>0.63%</td>
</tr>
<tr>
<td>Consumer Staples</td>
<td>7.00%</td>
<td>14.83%</td>
<td>14.84%</td>
<td>6.74%</td>
<td>15.85%</td>
<td>6.13%</td>
</tr>
<tr>
<td>Energy</td>
<td>7.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>6.02%</td>
<td>0.00%</td>
<td>-6.02%</td>
</tr>
<tr>
<td>Financials</td>
<td>12.00%</td>
<td>8.52%</td>
<td>8.52%</td>
<td>13.71%</td>
<td>6.96%</td>
<td>-6.75%</td>
</tr>
<tr>
<td>Industrials</td>
<td>10.00%</td>
<td>2.75%</td>
<td>7.25%</td>
<td>9.73%</td>
<td>6.07%</td>
<td>-3.66%</td>
</tr>
<tr>
<td>Technology</td>
<td>15.00%</td>
<td>5.17%</td>
<td>5.18%</td>
<td>20.84%</td>
<td>2.42%</td>
<td>-18.42%</td>
</tr>
<tr>
<td>Healthcare</td>
<td>10.00%</td>
<td>6.28%</td>
<td>6.28%</td>
<td>14.90%</td>
<td>17.86%</td>
<td>-3.96%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>7.00%</td>
<td>12.38%</td>
<td>12.39%</td>
<td>2.65%</td>
<td>7.28%</td>
<td>-4.63%</td>
</tr>
<tr>
<td>Utilities</td>
<td>5.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>2.82%</td>
<td>0.00%</td>
<td>-2.82%</td>
</tr>
<tr>
<td>Communication services</td>
<td>10.00%</td>
<td>24.02%</td>
<td>24.03%</td>
<td>9.93%</td>
<td>12.15%</td>
<td>7.95%</td>
</tr>
<tr>
<td>Cash</td>
<td>0.03%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Total | 100.00% | 100.00% | 100.00% | 100.00% | 10.01% |
We place an emphasis on risk management by considering a significant margin of safety and stop loss orders for each position.
The case method taught in FNCE 4301 and 4303 along with actively managing over $1 million develops a key set of soft and hard skills in all student managers:

**Soft Skills**

- Higher level thinking
- Present and defend a thesis
- Working as a team to challenge each other

**Hard Skills**

- Financial modeling: DCF, DDM, and Comparable
- Individual company analysis
- Data analysis: Bloomberg, Valueline, Thomson One Banker, IBISWorld
Thank You
Ulta Beauty – Thesis & Risks

Thesis
We recommend ULTA based on:

- **Largest Beauty Retailer:** ULTA is the premier beauty destination for cosmetics, fragrance, skin, hair care products, and salon services.
- **Unmatched Product Breadth:** Mix of high and low end products and beauty salon for “the beauty enthusiast”.
- **Store Growth:** Increased its number of stores in the US by 10% in 2018.

Risks

- **Highly Competitive Markets:** ULTA competes against a diverse group of retailers, and Ulta Beauty receives margin pressure for same-store sales growth.
- **Dependent on Subsidiaries:** ULTA is a holding company with no operations of its own and dependent on their subsidiaries earnings for cash.
- **E-Commerce Threats:** Ulta.com encounters risks and difficulties frequently experienced by internet-based businesses.
American Express – Thesis & Risks

**Thesis**

We recommend AXP based on:

- **Payments Industry Growth**: American Express’s spend-centric business model will benefit from a positive macroeconomic outlook and the increased use of cards globally

- **Industry Leading Innovation**: American Express is staying above their competition with their improved rewards program, digital and mobile technology integration and capture of millennials

- **Premium Brand**: American Express will continue to benefit from their industry leading credit quality and closed loop business model

**Risks**

- **Co-Branded Cards**: American Express’s arrangements are entered into for a fixed period, generally ranging from five to eight years

- **Pricing Pressure**: In recent years, global weighted average merchant discount rate has been under increasing pressure

- **Credit Risk**: Provision for losses increasing in the industry
### Thesis

We recommend DIS based on:

- **Unique Business Model:** 4 interconnected business segments and branded entertainment across multiple segments
- **The Disney Experience:** Strong brand, loyal customer base, and low sensitivity to price changes
- **Direct-to-Consumer Launch:** ESPN Plus streaming service, 2019 launch of direct-to-consumer streaming platform, and Fox acquisition assets will provide large content base to help compete with other direct to consumer models (Netflix, Amazon, etc.)

### Risks

- **Economic Outlook:** Changes in U.S or Global economic conditions have an impact on consumer spending
- **Studio Entertainment:** Success of studio entertainment and direct-to-consumer content dependent on consumer tastes and preferences
- **Changing Consumer Preferences:** Reduction in consumer demand for some Media Network content, specifically decline in cable TV popularity among younger generations and households
Electronic Arts – Thesis & Risks

**Thesis**

We recommend EA based on:

- **Franchise Strategy**: Well known, strongly branded franchises that can cheaply be leveraged into additional content
- **Improving Margins**: Growth in digital sales as a percentage of total revenue is driving stronger gross margins by decreasing operating expenses
- **Market Overreaction**: Delay of Battlefield V title resulted in a market overreaction that was not rooted in long-term business fundamentals

**Risks**

- **“Hit” Driven Industry**: Highly competitive with respect to consumer attention
- **Rapid Technological Changes**: Older products become outdated and act as an overall disruptive force
- **Cybersecurity & Piracy**: Poses constant risks due to the digital nature of EA’s products
### Prologis Inc – Thesis & Risks

#### Thesis

We recommended PLD based on:

- **Built-to-Suit Model**: Design customized distribution center, limits vacancies and productions expenses
- **International Expansion**: Built new facilities in China, Germany, France, and more; diversified Prologis’ holdings; and has a presence (ownership or joint-venture) in 19 countries
- **Inorganic Growth**: Purchased one of their biggest competitors (DCT Industrial)

#### Risks

- **International Relations**: Tariffs and trade disagreements
- **Rising Interest Rates**: Cost of borrowing makes it harder for business’s to expand
- **International Demand**: A faster-than-anticipated rise in the supply of distribution facilities, which could lead to an excess capacity, a drop in demand for industrial space
Lockheed Martin – Thesis & Risks

**Thesis**

We recommend LMT based on:

- **Profitable Business Model**: Highly competitive margins, consistent revenue growth, and achievable economics of scale
- **Significant Growth Potential**: Increase in European defense spending, increase in US defense spending, and strong government relationships
- **Game Changing Innovation**: Fostering innovative company mindset and potentially world-changing products under development

**Risks**

- **Trade War**: International sales risks for abroad business, especially with tariff uncertainty
- **Customer Base**: They are very dependent on the US government for contracts and revenue, so any changes in government budgets can affect sales
- **Competition**: Bid protests among contracts have been increasing over the last few years
Alphabet – Thesis & Risks

Thesis
We recommend GOOG based on:

- **Strong Business Model**: Alphabet is an industry leader that will continue to expand their reach as it generates free cash flow
- **Future Focused**: Alphabet is focused on investing in artificial intelligence and cloud software to make data of the world easily accessible to everyone
- **International Growth**: Alphabet is looking east to Asia to continue their growth. Alphabet recently launched a new app called Google Pay in India which has already processed over a billion dollars in payments

Risks

- **Internal Start-Ups**: The majority of Alphabet’s “other bets” business segment are in risky markets
- **Competition**: New companies continue to emerge to compete with Alphabet and could capture some of Alphabet’s predominant market share
- **Regulation**: Alphabet is the number one search engine in the world, and therefore has the risk of being considered a monopoly
UnitedHealth Group Inc. – Thesis & Risks

Thesis

We recommend UNH based on:

- **Dominant Market Share:** UNH has the dominant franchise and continues to gain share in Medicare Advantage, the most valuable growth market in managed care.
- **Lower Cost:** UNH is typically a medical cost ratio leader in the managed care industry.
- **M&A Growth:** Strategic investments like DMG and Catamaran add more doctors, and increase network access to hospitals/non-owned physicians, urgent care centers and more ambulatory surgical centers.

Risks

- **High Regulation:** UnitedHealth Group is regulated by federal, state and local governments in the United States and other countries where they do business.
- **Medical Costs:** The profitability of our products depends in large part on our ability to predict, price for and effectively manage medical costs.
- **Losses to Investment Portfolio:** Market fluctuations could impair their profitability and capital position; volatility in interest rates affects their interest income and the market value of their investment in debt securities of varying maturities.
Madison Square Garden Co. – Thesis & Risks

**Thesis**

We recommend MSG based on:

- **New Venues and Organizations**: MSG plans to build two state of the art concert venues in Las Vegas and London; and recently acquired the professional esports team Counter Logic Gaming.

- **The Potential Sale of MSG’s Sports Teams**: Professional teams owned by MSG have high resale values, and will sell at a premium over their estimated value.

- **Growth in Global Ticket & TV Revenue**: Concert ticket sales hit a record high in 2018 (up 12% from 2017); Record NBA and NHL TV deals were signed.

**Risks**

- **High levels of Competition**: There are many other New York sports teams competing for fans.

- **Rely on Popularity of Their Professional Sports Teams**: Varying success of their sports teams can effects fan’s willingness to pay for tickets.

- **Outside Decision**: CBAs and television contracts are negotiated by the leagues.
Costco Wholesale Corporation – Thesis & Risks

Thesis
We recommend COST based on:

• **Brand Loyalty**: Consistent membership; customer loyalty programs (Co-branded rewards credit card with Visa and Citi); and “Treasure hunt” shopping experience

• **Sales Growth and Expansion**: Same store sales growth; expansion plans; and in-store traffic increasing year over year

• **Increasing E-Commerce Penetration**: Gradually expanding its e-commerce capabilities in the U.S., Canada, U.K., Mexico, Korea, and Taiwan

Risks

• Heavily reliant on membership renewal and consumer preferences

• **Tight margins** as a result of highly discounted merchandise

• Faces competitive pricing pressure from other mass retailers or grocers, for example, Amazon and Walmart
Thesis

We recommend KMX based on:

- **Distribution Network:** 188 Active locations; added 15 stores in 2018; plan to add 15 more in 2019 and ultimately reach 300
- **Omnichannel System:** Serves the customer anywhere that they want to shop
- **Best in Class Used Car Retailer:** Largest used car retailer in the nation; and CarMax has a major focus on customer satisfaction

Risks

- **Retail Competition:** Smaller companies have announced plans to compete with no-haggle pricing
- **Online Sales Competition:** Accessible online pricing information is more available
- **Evolving Marketplace:** Exposure to broad automotive market changes; and long-term innovations such as autonomous cars could pose threats without proper response
Microsoft Corporation – Thesis & Risks

**Thesis**

We recommend MSFT based on:

- **Diversified and Interconnected Product Mix**: Productivity and business process, intelligent cloud, and personal computing products and services; Products and services are interconnected, encouraging addition purchases and use

- **Acquisition Success**: Several recent acquisitions have contributed to significant growth for Microsoft

- **Emphasis on Innovation**: Worldwide life-changing innovative programs; Microsoft Innovation Centers; Catalyze industry growth through expanding open source platforms

**Risks**

- **Significant Investments in Products and Services**: Investments in new technology is speculative and success depends on many factors

- **Cyber Security Attacks and Vulnerabilities**: Security of IT and customer data threats may occur; dynamic legal environment of global data movement; regulation of data management, data silos, and data centers

- **Highly Competitive Market**: Hardware from Sony, Nintendo; Software from Amazon and other developers
Charter Communications – Thesis & Risks

**Thesis**

We recommend CHTR based on:

- **Broadband & Subscriber Superiority:** Charter should be able to maintain market-share gains and revenue growth on its superior broadband speeds compared with telecom, as well as a shift of Time Warner Cable and Bright House subscribers to its Spectrum-brand pricing and packaging.

- **Mobile Growth & 5G Networks:** Over the longer term, Charter expects consumer savings from our mobile offerings to drive incremental cable become a more powerful retention tool.

- **Increasing Synergy Among Acquisitions:** With the integration of its most recent acquisitions (Time Warner Cable/Bright House Networks) well underway.

**Risks**

- **Highly Competitive Market:** Charter Communication operates in a very competitive business environment, which affects their ability to attract and retain customers and can adversely affect their business, operations, and financial results.

- **Increasing Programming Costs:** Can adversely affect their cash flow and operating margins.

- **Lack of Technological developments:** The ability of some of their competitors to introduce new technologies, products, and services more quickly than they do may affect their competitive position.
Boston Properties – Thesis & Risks

Thesis
We recommend BXP based on:

- **Diversified Geographic Range:** Boston, Los Angeles, Washington DC, New York, and San Francisco
- **Reliable Tent Base:** Industry leaders across Media & Tech, Finance, Retail, Government and Legal
- **Financial Performance:** Proactive pipeline development, and active investment movement (acquisition and disposition)

Risks
- Downturns in the national, regional and local economic conditions
- Local real estate market conditions, such as oversupply or reduction in demand for office, hotel, retail residential space
- Tenant Default Risk